

IN THE CLAIMS:

Please cancel claims 1-19, 30, 36 and 37, amend claims 20-29 and 31-35, and add new claims 38-50, as shown below in the detailed listing of all claims which are, or were, in this application:

Claims 1-19 (Canceled)

20. (Currently amended) A bioresorbable sol-gel derived SiO₂, ~~obtainable according to the method of claim 2,~~ wherein

- a) the SiO₂ is a monolith,
- b) the SiO₂ comprises no biologically active agent other than the SiO₂ itself, and
- c) the dissolution rate of the SiO₂ in a TRIS buffer at a temperature of +37 °C and pH 7.4 is ≥ 0.04 1.0 wt-%/h, said SiO₂ being prepared by correlating a desired biodegradability of SiO₂ with changes 1), 2) and/or 3) to a method of preparing a SiO₂ having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein
 - a) in the sol the starting

- i) pH is from 0.05 to 2.5,
 - ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,
 - iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and
- b) either,
- i) the sol is, without induced changes of sol composition,
 - let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
 - gelation of the sol is done by forced drying of the sol, or
 - ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and
the ratio t/t_{gel} is ≥ 0.005 , wherein
 t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and
 t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

iii) molar ratio of alcohol to the alkoxide or inorganic silicate;

from said values defined in a) i) - iii) of said method of preparing a SiO_2 ;

2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO_2 or 1) above if applied by

i) not carrying out forced drying, or

- ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO₂; and
- 3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO₂; and by preparing said SiO₂ with said changes to the method correlating with the desired biodegradability.

21. (Currently amended) ~~A The bioresorbable sol-gel derived SiO₂ of claim 20, obtainable according to the method of claim 2, wherein~~

~~a) the SiO₂ is a monolith,~~

~~b) the SiO₂ further comprises at least one biologically active agent other than the SiO₂ itself, and~~

~~c) the dissolution rate of the SiO₂ in a TRIS buffer at a temperature of +37 °C and pH 7.4 is \geq 0.35 wt %/h.~~

22. (Currently amended) A bioresorbable sol-gel derived SiO₂, ~~obtainable according to the method of claim 2, wherein~~

a) the SiO₂ is a coating,

b) the SiO_2 comprises no biologically active agent other than the SiO_2 itself, and

c) the dissolution rate of the SiO_2 in TRIS buffer at a temperature of +37 °C and pH 7.4 is ≥ 0.04 wt-%/h,

said SiO_2 being prepared by correlating a desired biodegradability of SiO_2 with changes 1), 2) and/or 3) to a method of preparing a SiO_2 having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

a) in the sol the starting

i) pH is from 0.05 to 2.5,

ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,

iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and

b) either,

i) the sol is, without induced changes of sol composition,

- let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or

• gelation of the sol is done by forced drying of the sol, or

ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and

t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and

wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

- iii) molar ratio of alcohol to the alkoxide or inorganic silicate;
- from said values defined in a) i) - iii) of said method of preparing a SiO₂;
- 2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO₂ or 1) above if applied by
- i) not carrying out forced drying, or
- ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO₂; and
- 3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO₂; and by
- preparing said SiO₂ with said changes to the method correlating with the desired biodegradability.

23. (Currently amended) ~~A The bioresorbable sol-gel derived SiO₂ of claim 22, obtainable according to the method of claim 2, wherein~~

~~a) the SiO₂ is a coating,~~

b) the SiO₂ further comprises at least one biologically active agent other than the SiO₂ itself, ~~and~~

~~c) the dissolution rate of the SiO₂ in TRIS buffer at a temperature of +37 °C and pH 7.4 is \geq 0.04 wt-%/h.~~

24. (Currently amended) A bioresorbable sol-gel derived SiO₂, ~~obtainable according to the method of claim 2 wherein~~

a) the SiO₂ is a particle,

b) the SiO₂ comprises no biologically active agent other than the SiO₂ itself, and

c) the dissolution rate of the SiO₂ in TRIS buffer at a temperature of +37 °C and pH 7.4 is \geq ~~0.04~~ 1.0 wt-%/h,

said SiO₂ being prepared by correlating a desired biodegradability of SiO₂ with changes 1), 2) and/or 3) to a method of preparing a SiO₂ having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with \leq 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

a) in the sol the starting

i) pH is from 0.05 to 2.5,

ii) molar ratio of water to the alkoxide or inorganic
silicate is 0.5 to 2.5,

iii) molar ratio of alcohol to the alkoxide or inorganic
silicate is ≥ 0.5 ; and

b) either,

i) the sol is, without induced changes of sol composition,

• let to gel spontaneously at a temperature of ≤ 25
 $^{\circ}\text{C}$ or an elevated temperature of 65°C to 90°C , or

• gelation of the sol is done by forced drying of the
sol, or

ii) a change or changes of sol composition are induced after
sol ageing but before gel formation, said change or changes of
sol composition optionally comprising addition of a
biologically active agent or agents with or without
protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from
preparation of said sol to the induced changes, and

t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and
forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and
wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

iii) molar ratio of alcohol to the alkoxide or inorganic silicate;

from said values defined in a) i) - iii) of said method of preparing a SiO_2 ;

2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO_2 or 1) above if applied by

i) not carrying out forced drying, or

- ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO₂; and
- 3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO₂; and by preparing said SiO₂ with said changes to the method correlating with the desired biodegradability.

25. (Currently amended) ~~A~~ The bioresorbable sol-gel derived SiO₂ of claim 24, ~~obtainable according to the method of claim 2 wherein~~

a) ~~the SiO₂ is a particle,~~

b) the SiO₂ further comprises at least one biologically active agent other than the SiO₂ itself, ~~and~~

c) ~~the dissolution rate of the SiO₂ in TRIS buffer at a temperature of +37 °C and pH 7.4 is ≥ 0.5 wt-%/h.~~

26. (Currently amended) The SiO₂ according to claim 20, wherein the dissolution rate of the SiO₂ is ≥ ~~0.30~~ 2.0 wt-%/h.

27. (Currently amended) The SiO_2 according to ~~claim 21~~ claim 26, wherein the dissolution rate of the SiO_2 is ≥ 0.5 4.0 wt-%/h.

28. (Currently amended) A bioresorbable sol-gel derived SiO_2 , ~~obtainable according to the method of claim 2,~~ wherein

- a) the SiO_2 is a monolith,
- b) the SiO_2 comprises no biologically active agent other than the SiO_2 itself, and
- c) the dissolution rate of the SiO_2 in a TRIS buffer at a temperature of +37 °C and pH 7.4 is from 0.001 to ~~0.15~~ 0.05 wt-%/h,

said SiO_2 being prepared by correlating a desired biodegradability of SiO_2 with changes 1), 2) and/or 3) to a method of preparing a SiO_2 having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

- a) in the sol the starting
 - i) pH is from 0.05 to 2.5,
 - ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,

iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and

b) either,

i) the sol is, without induced changes of sol composition,
• let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
• gelation of the sol is done by forced drying of the sol, or

ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and

t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and

wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

iii) molar ratio of alcohol to the alkoxide or inorganic silicate;

from said values defined in a) i) - iii) of said method of preparing a SiO₂;

2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO₂ or 1) above if applied by

i) not carrying out forced drying, or

ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO₂; and

3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO₂; and by preparing said SiO₂ with said changes to the method correlating with the desired biodegradability.

29. (Currently amended) ~~A The bioresorbable sol-gel derived SiO₂ of claim 28, obtainable according to the method of claim 2, wherein~~
~~a) the SiO₂ is a monolith,~~
~~b) the SiO₂ further comprises at least one biologically active agent other than the SiO₂ itself, and~~
~~c) the dissolution rate of the SiO₂ in a TRIS buffer at a temperature of +37 °C and pH 7.4 is from 0.001 to 0.06 wt-%/h.~~

30. (Canceled)

31. (Currently amended) A bioresorbable sol-gel derived SiO₂,
~~obtainable according to the method of claim 2 wherein~~
~~a) the SiO₂ is a particle coating,~~
~~b) the SiO₂ comprises no biologically active agent other than the SiO₂ itself, and~~

c) the dissolution rate of the SiO_2 in TRIS buffer at a temperature of +37 °C and pH 7.4 is from 0.001 to ~~0.008~~ 0.015 wt-%/h,

said SiO_2 being prepared by correlating a desired biodegradability of SiO_2 with changes 1), 2) and/or 3) to a method of preparing a SiO_2 having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

a) in the sol the starting

i) pH is from 0.05 to 2.5,

ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,

iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and

b) either,

i) the sol is, without induced changes of sol composition,

• let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or

• gelation of the sol is done by forced drying of the sol, or

ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and

t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and

wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

iii) molar ratio of alcohol to the alkoxide or inorganic silicate;

- from said values defined in a) i) - iii) of said method of preparing a SiO₂;
- 2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO₂ or 1) above if applied by
- i) not carrying out forced drying, or
- ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO₂; and
- 3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO₂; and by preparing said SiO₂ with said changes to the method correlating with the desired biodegradability.

32. (Currently amended) A The bioresorbable sol-gel derived SiO₂ of claim 31, ~~obtainable according to the method of claim 2 wherein~~

~~a) the SiO₂ is a particle,~~

- b) the SiO_2 further comprises at least one biologically active agent other than the SiO_2 itself, ~~and~~
- c) ~~the dissolution rate of the SiO_2 in TRIS buffer at a temperature of +37 °C and pH 7.4 is from 0.001 to 0.10 wt-%/h.~~

33. (Currently amended) A The bioresorbable sol-gel derived SiO_2 monolith, coating, or particle, obtainable according to the method of claim 2 of claim 21, wherein said SiO_2 comprises a biologically active agent other than the SiO_2 itself and said biologically active agent is a peptide, protein or cell, ~~wherein the dissolution rate of the SiO_2 in TRIS buffer at a temperature of +37 °C and pH 7.4 is ≥ 0.04 wt-%/h.~~

34. (Currently amended) A The bioresorbable sol-gel derived SiO_2 monolith, coating, or particle, obtainable according to the method of claim 2 of claim 21, wherein said SiO_2 comprises a biologically active agent other than the SiO_2 itself and said biologically active agent is a peptide, protein or cell, wherein the dissolution rate of the SiO_2 is ≥ 0.5 2.0 wt-%/h.

35. (Currently amended) ~~A The bioresorbable sol-gel derived SiO₂ monolith, coating, or particle, obtainable according to the method of claim 2 of claim 29, wherein said SiO₂ comprises a biologically active agent other than the SiO₂ itself and said biologically active agent is a peptide, protein or cell, wherein the dissolution rate of the SiO₂ in TRIS buffer at a temperature of +37 °C and pH 7.4 is from 0.001 to 0.15 wt-%/h.~~

36. (Canceled)

37. (Canceled)

38. (New) A bioresorbable sol-gel derived SiO₂, wherein

- a) the SiO₂ is a monolith,
 - b) the SiO₂ comprises no biologically active agent other than the SiO₂ itself, and
 - c) the dissolution rate of the SiO₂ in a TRIS buffer at a temperature of +37 °C and pH 7.4 is ≥ 1.0 wt-%/h,
- said SiO₂ being prepared from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using

a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

- a) in the sol the starting
 - i) pH is from 0.05 to 2.5,
 - ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,
 - iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and
- b) either,
 - i) the sol is, without induced changes of sol composition,
 - let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
 - gelation of the sol is done by forced drying of the sol, or
 - ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from

preparation of said sol to the induced changes, and
 t_{gel} is the time point where the sol would have turned to
a gel without the induced changes; and
forced drying of the sol is carried out or initiated within a
time of ≤ 30 minutes.

39. (New) The bioresorbable sol-gel derived SiO_2 of claim 38,
wherein the SiO_2 further comprises at least one biologically active
agent other than the SiO_2 itself.

40. (New) A bioresorbable sol-gel derived SiO_2 , wherein

- a) the SiO_2 is a coating,
- b) the SiO_2 comprises no biologically active agent other than the
 SiO_2 itself, and
- c) the dissolution rate of the SiO_2 in TRIS buffer at a
temperature of $+37^\circ\text{C}$ and pH 7.4 is ≥ 0.04 wt-%/h,
said SiO_2 being prepared from a sol comprising water, an alkoxide
or inorganic silicate and a lower alcohol with ≤ 4 carbons, using
a mineral acid or a base as a catalyst, aging said sol and drying
said sol, wherein
 - a) in the sol the starting

- i) pH is from 0.05 to 2.5,
 - ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,
 - iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and
- b) either,
- i) the sol is, without induced changes of sol composition,
 - let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
 - gelation of the sol is done by forced drying of the sol, or
 - ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and
- the ratio t/t_{gel} is ≥ 0.005 , wherein
- t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and
- t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes.

41. (New) The bioresorbable sol-gel derived SiO_2 of claim 40, wherein the SiO_2 further comprises at least one biologically active agent other than the SiO_2 itself.

42. (New) A bioresorbable sol-gel derived SiO_2 , wherein

- a) the SiO_2 is a particle,
- b) the SiO_2 comprises no biologically active agent other than the SiO_2 itself, and
- c) the dissolution rate of the SiO_2 in TRIS buffer at a temperature of $+37^\circ\text{C}$ and pH 7.4 is ≥ 1.0 wt-%/h, said SiO_2 being prepared from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein
 - a) in the sol the starting
 - i) pH is from 0.05 to 2.5,
 - ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,

- iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and
- b) either,
- i) the sol is, without induced changes of sol composition,
- let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
 - gelation of the sol is done by forced drying of the sol, or
- ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and
- the ratio t/t_{gel} is ≥ 0.005 , wherein
- t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and
- t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and
- forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes.

43. (New) The bioresorbable sol-gel derived SiO_2 of claim 42, wherein the SiO_2 further comprises at least one biologically active agent other than the SiO_2 itself.

44. (New) The SiO_2 of claim 38, wherein the dissolution rate of the SiO_2 is ≥ 2.0 wt-%/h.

45. (New) The SiO_2 of claim 44, wherein the dissolution rate of the SiO_2 is ≥ 4.0 wt-%/h.

46. (New) The bioresorbable sol-gel derived SiO_2 of claim 39, wherein said biologically active agent is a peptide, protein or cell.

47. (New) The bioresorbable sol-gel derived SiO_2 of claim 39, wherein the dissolution rate of the SiO_2 is ≥ 2.0 wt-%/h.

48. (New) A bioresorbable sol-gel derived SiO_2 , wherein

- a) the SiO_2 is a particle,
- b) the SiO_2 comprises no biologically active agent other than the SiO_2 itself, and

c) the dissolution rate of the SiO_2 in TRIS buffer at a temperature of +37 °C and pH 7.4 is 0.001 to 0.008 wt-%/h, said SiO_2 being prepared by correlating a desired biodegradability of SiO_2 with changes 1), 2) and/or 3) to a method of preparing a SiO_2 having a very fast bioresorption rate from a sol comprising water, an alkoxide or inorganic silicate and a lower alcohol with ≤ 4 carbons, using a mineral acid or a base as a catalyst, aging said sol and drying said sol, wherein

a) in the sol the starting

i) pH is from 0.05 to 2.5,

ii) molar ratio of water to the alkoxide or inorganic silicate is 0.5 to 2.5,

iii) molar ratio of alcohol to the alkoxide or inorganic silicate is ≥ 0.5 ; and

b) either,

i) the sol is, without induced changes of sol composition,

- let to gel spontaneously at a temperature of ≤ 25 °C or an elevated temperature of 65 °C to 90 °C, or
- gelation of the sol is done by forced drying of the sol, or

ii) a change or changes of sol composition are induced after sol ageing but before gel formation, said change or changes of sol composition optionally comprising addition of a biologically active agent or agents with or without protective agent or agents, and

the ratio t/t_{gel} is ≥ 0.005 , wherein

t is the ageing time of the sol, i.e. time from preparation of said sol to the induced changes, and

t_{gel} is the time point where the sol would have turned to a gel without the induced changes; and

forced drying of the sol is carried out or initiated within a time of ≤ 30 minutes from said induced change or changes, and

wherein

1) comprises deviating in the sol any of the starting values:

i) pH

ii) molar ratio of water to the alkoxide or inorganic silicate, and/or

iii) molar ratio of alcohol to the alkoxide or inorganic silicate;

- from said values defined in a) i) - iii) of said method of preparing a SiO_2 ;
- 2) comprises carrying out induced changes by addition of a component or components, including optional addition of the biologically active agent or agents with or without said protective agent or agents, said changes affecting any of the values i) - iii) of a) of said method of preparing a SiO_2 or 1) above if applied by
- i) not carrying out forced drying, or
 - ii) carrying out or initiating forced drying of the sol later than defined in b) ii) of said method of preparing a SiO_2 ; and
- 3) comprises deviating the temperature for letting the sol gel spontaneously from the values defined in b) i) of said method of preparing a SiO_2 ; and by preparing said SiO_2 with said changes to the method correlating with the desired biodegradability.

49. (New) The bioresorbable sol-gel derived SiO_2 of claim 23, wherein the biologically active agent is a peptide, protein or cell.

50. (New) The bioresorbable sol-gel derived SiO_2 of claim 25, wherein the biologically active agent is a peptide, protein or cell.